



State of Utah

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Department of  
Environmental Quality

L. Scott Baird  
*Executive Director*

DIVISION OF AIR QUALITY  
Bryce C. Bird  
*Director*

DAQE-AN105720040-20

February 4, 2020

Achille Njike  
Rio Tinto Kennecott Utah Copper LLC  
4700 Daybreak Parkway  
South Jordan, UT 84095

Dear Mr. Njike:

Re: Approval Order:  
Administrative Amendment to Approval Order DAQE-AN105720031-15 to Remove Power Plant  
Boilers, Turbine, and Supporting Equipment  
Project Number: N105720040

The attached Approval Order (AO) is issued pursuant to the Notice of Intent (NOI) received on September 11, 2019. Rio Tinto Kennecott Utah Copper LLC must comply with the requirements of this AO, all applicable state requirements (R307), and Federal Standards.

The project engineer for this action is **Ms. Catherine Wyffels**, who can be contacted at (801) 536-4232 or cwyffels@utah.gov. Future correspondence on this AO should include the engineer's name as well as the DAQE number shown on the upper right-hand corner of this letter.

Sincerely,

**Signed by Bryce C. Bird on February 4, 2020**

Bryce C. Bird  
Director

BCB:CW:sa

cc: Salt Lake County Health Department  
Patrick Wauters, EPA Region VIII



**STATE OF UTAH**  
**Department of Environmental Quality**  
**Division of Air Quality**

**APPROVAL ORDER**  
**DAQE-AN105720040-20**  
**Administrative Amendment to Approval Order DAQE-**  
**AN105720031-15 to Remove Power Plant Boilers,**  
**Turbine, and Supporting Equipment**

**Prepared By**  
**Ms. Catherine Wyffels, Engineer**  
**(801) 536-4232**  
**cwyffels@utah.gov**

**Issued to**  
**Rio Tinto Kennecott Utah Copper LLC - Power Plant**  
**Lab Tailings Impoundment**

**Signed by Bryce C. Bird on February 4, 2020**

**Issued By**  
**Bryce C. Bird**  
**Director**  
**Division of Air Quality**

**Date: February 4, 2020**



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## GENERAL INFORMATION

### CONTACT/LOCATION INFORMATION

**Owner Name**

Rio Tinto Kennecott Utah Copper LLC

**Source Name**Rio Tinto Kennecott Utah Copper LLC -  
Power Plant Lab Tailings Impoundment**Mailing Address**4700 Daybreak Parkway  
South Jordan, UT 84095**Physical Address**9600 West 2100 South  
Magna, UT 84044-6001**Source Contact**Name Jenny Esker  
Phone (801) 569-6494  
Email jenny.esker@riotinto.com**UTM Coordinates**405000 m Easting  
4507000 m Northing  
Datum NAD27  
UTM Zone 12**SIC code** 4911 (Electric Services)

### SOURCE INFORMATION

General Description

Rio Tinto Kennecott Utah Copper LLC (KUC) has requested an administrative amendment to AO DAQE-AN105720031-15 to update operations and equipment at the Utah Power Plant. KUC has decided to voluntarily decommission Unit 4 and associated support equipment and cancel the construction of Unit 5. In addition, Units 1, 2, and 3 were removed from this AO since they are prohibited from operating as per Section IX Part H.2 of the PM State Implementation Plan (SIP). This change will result in a decrease in emissions and is being processed as an administrative amendment as per R307-401-12, Reduction in Air Pollutants. As a result of this change in operations, the following emission totals (in TPY) were banked: PM<sub>10</sub> = 233.84, PM<sub>2.5</sub> (subset of PM<sub>10</sub>) = 223.81, NO<sub>x</sub> = 212.80, SO<sub>2</sub> = 16.03, CO = 478.68, and VOC = 46.26.

The PTE for this source is now below the small source exemption thresholds in R307-401-9; however, KUC has elected to retain the AO for current operations. Title V of the 1990 CAA will no longer apply to this source.

NSR Classification

Administrative Amendment

Source Classification

Located in Northern Wasatch Front O3 NAA, Salt Lake City UT PM<sub>2.5</sub> NAA, Salt Lake County PM<sub>10</sub> NAA, Salt Lake County SO<sub>2</sub> NAA  
Salt Lake County  
Airs Source Size: B

Applicable Federal Standards

NSPS (Part 60), A: General Provisions

NSPS (Part 60), IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

NSPS (Part 60), JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

MACT (Part 63), A: General Provisions

MACT (Part 63), ZZZZ: NESHAP for Stationary Reciprocating Internal Combustion Engines

Project Description

KUC has requested an administrative amendment to AO DAQE-AN105720031-15 to update operations and equipment at the Utah Power Plant. The following equipment will be removed from the AO:

1. Units 1, 2, and 3 - KUC has not operated these units since October 2016. These units are prohibited from operating as per Section IX Part H.2.h.i.A. of the PM SIP. These items were listed as II.A.2, II.A.3, and II.A.4 in DAQE-AN105720031-15 as Power Plant Boilers each rated at 431 MMBtu/hr (coal) and 453 MMBtu/hr (natural gas).
2. Unit 4 - KUC is voluntarily decommissioning Unit 4. This item was listed as II.A.5 in DAQE-AN105720031-15 as Power Plant Boiler rated at 838 MMBtu/hr (coal) and 872 MMBtu/hr (natural gas).
3. Unit 5 - KUC has elected to cancel the construction of Unit 5. This item was listed as II.A.6 in DAQE-AN105720031-15 as Power Plant Turbine with a nominal rating of 275 MW.
4. Ancillary support equipment - Support equipment, such as cooling towers and material handling sources, will cease operations as a result of decommissioning of Units 1, 2, 3, and 4. The items removed from the AO include one (1) cooling tower, the hydraulic coal unloader system with diesel engines, and coal and ash handling equipment. In DAQE-AN105720031-15, these items were listed in II.A.9, II.A.11, and II.A.12.

KUC will continue to operate a diesel emergency generator engine, cooling tower, degreasers and two (2) natural gas-fired emergency generators to support the KUC electricity distribution control room as well as decommissioning activities and office space at the Utah Power Plant.

These changes will result in a decrease in emissions and is being processed as an administrative amendment as per R307-401-12, Reduction in Air Pollutants.

**SUMMARY OF EMISSIONS**

The emissions listed below are an estimate of the total potential emissions from the source. Some rounding of emissions is possible.

<b>Criteria Pollutant</b>	<b>Change (TPY)</b>	<b>Total (TPY)</b>
CO <sub>2</sub> Equivalent	-1,162,537.26	21.67
Carbon Monoxide	-327.90	0.23
Nitrogen Oxides	-1,640.80	0.47
Particulate Matter - PM <sub>10</sub>	-247.42	0.60
Particulate Matter - PM <sub>2.5</sub>	-247.68	0.32
Sulfur Dioxide	-2,576.83	0.23
Volatile Organic Compounds	-39.45	1.58

<b>Hazardous Air Pollutant</b>	<b>Change (TPY)</b>	<b>Total (lbs/yr)</b>
Total HAPs (CAS #THAPS)	-8.99	2
	<b>Change (TPY)</b>	<b>Total (TPY)</b>
Total HAPs	-8.99	<0.01

**SECTION I: GENERAL PROVISIONS**

I.1	All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
I.2	The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
I.3	Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]
I.4	All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401-8]
I.5	At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
I.6	The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]
I.7	The owner/operator shall comply with UAC R307-150 Series. Emission Inventories. [R307-150]

## SECTION II: PERMITTED EQUIPMENT

### II.A THE APPROVED EQUIPMENT

II.A.1	<b>Utah Power Plant</b>
II.A.2	<b>Cold Solvent Parts Washers</b>  Degreaser used for maintenance cleaners at various locations throughout the source. Estimated solvent usage 500 gal/yr.
II.A.3	<b>Wet Cooling Tower</b>  One non-contact water-cooling tower
II.A.4	<b>Natural Gas-Fired Emergency Generators</b>  North Generator rated at 1.2 MMBTU/hr (80 kW, 128 hp) South Generator rated at 1.2 MMBTU/hr (80 kW, 128 hp)
II.A.5	<b>Diesel-Fired Emergency Fire Pump Generator</b>  Rating: 175 hp Fuel: Diesel Manufacture Date: 2008 40 CFR NSPS Subpart IIII/ 40 CFR MACT Subpart ZZZZ

## SECTION II: SPECIAL PROVISIONS

### II.B REQUIREMENTS AND LIMITATIONS

II.B.1	<b>Plant-wide Conditions</b>
II.B.1.a	Visible emissions from the following stationary sources shall not exceed the following opacity limits:  A. Natural gas-fired emergency generator engines - 10%  B. Diesel-fired emergency generator engine - 20%  C. Cooling tower - 10%  D. All other sources - 20%  [R307-201]
II.B.1.a.1	Opacity observations of emissions from stationary sources shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9. [R307-305]
II.B.2	<b>Emergency Engine Requirements</b>
II.B.2.a	The owner/operator shall not operate each emergency engine on site for more than 100 hours per rolling 12-month period during non-emergency situations. There is no time limit on the use of the engines during emergencies. [R307-401-8, 40 CFR 63 Subpart ZZZZ]

II.B.2.a.1	<p>To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the 20th day of each month using data from the previous 12 months. Records documenting the operation of each emergency engine shall be kept in a log and shall include the following:</p> <ul style="list-style-type: none"> <li>A. The date the emergency engine was used</li> <li>B. The duration of operation in hours</li> <li>C. The reason for the emergency engine usage</li> </ul> <p>[R307-401-8, 40 CFR 63 Subpart ZZZZ]</p>
II.B.2.a.2	<p>To determine compliance with the rolling 12-month total, the owner/operator shall install a non-resettable hour meter for each emergency engine. [40 CFR 60 Subpart ZZZZ, R307-401-8]</p>
II.B.2.b	<p>The owner/operator shall only use diesel fuel (e.g. fuel oil #1, #2, or diesel fuel oil additives) as fuel in the diesel-fired emergency fire pump generator engine (II.A.5). [R307-401-8]</p>
II.B.2.b.1	<p>The owner/operator shall only combust diesel fuel that meets the definition of ultra-low sulfur diesel (ULSD), which has a sulfur content of 15 ppm or less. [R307-401-8]</p>
II.B.2.b.2	<p>To demonstrate compliance with the ULSD fuel requirement, the owner/operator shall maintain records of diesel fuel purchase invoices or obtain certification of sulfur content from the diesel fuel supplier. The diesel fuel purchase invoices shall indicate the diesel fuel meets the ULSD requirements. [R307-401-8]</p>

## PERMIT HISTORY

This Approval Order shall supersede (if a modification) or will be based on the following documents:

Is Derived From  
Supersedes

NOI dated September 11, 2019  
AO DAQE-AN105720031-15 dated November 10, 2015

## ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by Environmental Protection Agency to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2e</sub>	Carbon Dioxide Equivalent - Title 40 of the Code of Federal Regulations Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ/UDAQ	Division of Air Quality
DAQE	This is a document tracking code for internal Division of Air Quality use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - Title 40 of the Code of Federal Regulations 52.21 (b)(49)(i)
GWP	Global Warming Potential - Title 40 of the Code of Federal Regulations Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/YR	Pounds per year
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO <sub>x</sub>	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM <sub>10</sub>	Particulate matter less than 10 microns in size
PM <sub>2.5</sub>	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO <sub>2</sub>	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
VOC	Volatile organic compounds